

## Claims:

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5 1. A method of inhibiting transport of anandamide in an individual or animal comprising administering to the individual or animal a therapeutically effective amount of a compound represented by the following structural formula:



and physiologically acceptable salts thereof, wherein:

10 X is a member selected from the group consisting of a hydrophobic aliphatic hydrocarbon chain containing from about 4 to about 30 carbon atoms and having one or more nonconjugated cis double bonds in the middle portion of the chain with a terminal radical selected from the group consisting of hydrogen, aryl and aryl substituted with a member selected from the group consisting of hydroxy, halogen, -NO<sub>2</sub>, -NH<sub>2</sub>, -CH<sub>3</sub>, -OCH<sub>3</sub> and -SCH<sub>3</sub>, or biphenyl or biphenyl having a terminal straight or branched alkyl group of about 1 to about 10 carbon atoms;

15 Y is selected from the group consisting of hydrogen, -NH-C(O)-, -NH-, -NH-C(O)-NH-, -NH-C(O)O-, -C(O)-NH-, -O-C(O)-, -O- and -S-; and

20 Z is selected from the group consisting of hydrogen, aryl, alkyl aryl, halogen substituted alkyl aryl, cyclic glycerols and substituted cyclic glycerols.

25 2. The method of claim 1 wherein the radicals on the substituted cyclic glycerol are selected from the group consisting of lower alkyl of about 1 to about 5 carbon atoms, aryl and substituted aryl.

3. The method of claim 1 wherein Y is a carbonyl amine radical.

30 4. The method of claim 1 wherein X is a biphenyl having a terminal alkyl group.

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5. The method of claim 1 wherein X is an aliphatic hydrocarbon chain having two or more nonconjugated double bonds.
6. The method of claim 1 wherein X is an aliphatic hydrocarbon chain having at least four nonconjugated double bonds.
7. The method of claim 1 wherein Z is a hydroxy substituted aryl group.
8. A compound represented by the following structural formula:  
$$X - Y - Z$$
  
and physiologically acceptable salts thereof, wherein:  
X is a member selected from the group consisting of a hydrophobic aliphatic hydrocarbon chain containing from about 4 to about 30 carbon atoms and having one or more nonconjugated cis double bonds in the middle portion of the chain with a terminal radical selected from the group consisting of hydrogen, aryl and aryl substituted with a member selected from the group consisting of hydroxy, halogen,  $-\text{NO}_2$ ,  $-\text{NH}_2$ ,  $-\text{CH}_3$ ,  $-\text{OCH}_3$  and  $-\text{SCH}_3$ , or biphenyl or biphenyl having a terminal straight or branched alkyl group of about 1 to about 10 carbon atoms;  
Y is selected from the group consisting of hydrogen,  $-\text{NH}-\text{C}(\text{O})-$ ,  $-\text{NH}-$ ,  $-\text{NH}-\text{C}(\text{O})-\text{NH}-$ ,  $-\text{NH}-\text{C}(\text{O})\text{O}-$ ,  $-\text{C}(\text{O})-\text{NH}-$ ,  $-\text{O}-\text{C}(\text{O})-$ ,  $-\text{O}-$  and  $-\text{S}-$ ; and  
Z is selected from the group consisting of hydrogen, aryl, alkyl aryl, halogen substituted alkyl aryl, cyclic glycerols and substituted cyclic glycerols.
9. The compound of claim 8 wherein the radicals on the substituted cyclic glycerol are selected from the group consisting of lower alkyl of about 1 to about 5 carbon atoms, aryl and substituted aryl

10. The compound of claim 8 wherein Y is a carbonyl amine radical.

5 11. The compound of claim 8 wherein X is a biphenyl having a terminal alkyl group.

12. The compound of claim 8 wherein X is an aliphatic hydrocarbon chain having two or more nonconjugated double bonds.

10 13. The compound of claim 8 wherein X is an aliphatic hydrocarbon chain having at least four nonconjugated double bonds.

14. The compound of claim 8 wherein Z is a hydroxy substituted aryl group.